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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,837	02/06/2002	Daniel B. Roitman	10011370-1	3741

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AGILENT TECHNOLOGIES, INC.
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EXAMINER	
EPPERSON, JON D	

ART UNIT	PAPER NUMBER
1639	

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,837	ROITMAN ET AL.	
	Examiner	Art Unit	
	Jon D. Epperson	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20 and 26-29* is/are pending in the application.

4a) Of the above claim(s) *4,6,11,12,14,15,28 and 29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,7-10,13,16-20,26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *2/6/02* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination (RCE)

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection (e.g., see 2/16/05 Response). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/04 has been entered. Claims 1-20 and 26-29 were pending. Applicants amended claims 1, 16, 18-20 and 26. No claims were added or canceled. Therefore, claims 1-20 and 26-29 are still pending. In addition, Claims 4, 6, 11, 12, 14, 15, 28 and 29 are drawn to non-elected species and/or inventions and thus these claims remain withdrawn from further consideration by the examiner, 37 CFR 1.142(b), there being no allowable generic claim. Thus, claims 1-3, 5, 7-10, 13, 16-20, 26 and 27 are examined on the merits.

Those sections of Title 35, US code, not included in the instant action can be found in previous office actions.

Withdrawn Objections/Rejections

2. The objection to claim 16 is withdrawn in view of Applicants' amendments. The New Matter rejection denoted "A" under 35 U.S.C. § 101 is hereby withdrawn in view of Applicants' arguments and/or amendments. The Lee et al. rejection under 35 U.S.C. § 102(e) is hereby withdrawn in view of Applicants' arguments and/or amendments. All other rejections are maintained and the arguments are addressed below.

Outstanding Objections and/or Rejections

Claims Rejections - 35 U.S.C. 102

3. Claims 1-3, 5, 7-10, 13, 18-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Natan et al. (WO 01/025002 A1) (Date of Publication **12 April 2001**).

For ***claim 1***, Natan et al. (see entire document) disclose methods for making colloidal rod particles as nanobar codes (see Natan et al., abstract; see also claims), which anticipates the claimed invention. For example, Natan et al. disclose **(a)** producing a multi-layered structure (e.g., see Natan et al., page 7, lines 1-5, "In preferred embodiments ... the nanobar code particles are made by electrochemical deposition ... though they may easily be prepared by other means, both with or without a template"; see also figure 1A showing three different layers i.e., layers A, B and C; see also page 15, lines 5-11, "The present invention is directed to freestanding nanobar codes and their uses ... Nanobar codes that are not produced by some form of deposition or growth within a template ... may be considered free standing even though they have not been released from a template"; see also page 16, paragraph 2, "The particles of the present invention may be prepared by a variety of processes. The preferred process for the manufacture of a particular particle can often be a function of the nature of the segments comprising the particle ... Other methods that may be applied to nanobar code (and template) synthesis include those that occur in solution (e.g., microfluidic synthesis), and/or involve photochemical techniques, MEMS, e-beam, micro-contact printing, and laser ablation methods"). Furthermore, Natan et al. disclose the use of transducing materials to make each layer of said structure (e.g., see Summary of Invention, page 3, last paragraph, "The

present invention includes free-standing particles comprising a plurality of segments ... The segments of the particles of the present invention may be comprised of any material. Included among the possible materials are a metal, any metal chalcogenide, a metal oxide, a metal sulfide, ... [etc]"; see also Example 2, wherein CdSe [i.e., Applicant's elected species] is disclosed; see also Figures 1-6; see also page 17, lines 17-18; see especially paragraph bridging pages 17-18; see also page 22, paragraph 1; see also page 10, last paragraph). Furthermore, Natan et al. disclose **(b)** dividing the multi-layered structure into the plurality of microbar encoders wherein the plurality of microbar encoders have a characteristic detectable signal (e.g., see page 4, paragraph 2, wherein Natan et al. disclose the production of a "plurality" of nanobar tags; see also page 4, paragraph 4, "The present invention includes an assembly of particles comprising a plurality of types of particles wherein each particle has one dimension of less than 10 um, and wherein the types of particles are differentiable. Preferably, the types of particles are differentiable based on the length, width, shape and/or composition of the particles"; see also page 5, paragraph 3; see especially page 12, paragraph 2, "In certain embodiments, the members of the assembly are identical while, in other embodiments, the assembly is comprised of a plurality of different types of particles"; see also page 12, paragraphs 3-4; see also page 49, last paragraph; see also page 28, last paragraph, see also claims 37, 55 and 82; see also page 28, last paragraph, "Following synthesis, whether on membrane or planar substrate, die separation techniques from the semiconductor industry can be utilized. The substrate will be mated to a flexible adhesive material. A dicing saw cuts through the substrate, leaving the adhesive intact. The adhesive is then uniformly

stretched to provide physical separation between each island, each of which is then picked up automatically by robot and placed into a separate microwell [i.e., the multi-well structure is ***divided*** using a dicing saw]"). In addition, Natan et al. provide numerous other examples for "dividing" the multi-layered structure including "reversible" self-assembly of multi-layered structures, laser ablation, etc. (e.g., see Natan et al., middle paragraph). Natan et al. also disclose the use of a "silver plug" to "divide" or "separate out" the microbar encoders (e.g., see Natan et al., page 26, last paragraph).

For ***claim 2***, Natan et al. disclose method steps for detaching the microbar encoders from the substrate (e.g., see page 28, last paragraph, "a final critical step is required to separate each unique type of nanorod and release all the nanorods into solution").

For ***claim 3***, Natan et al. disclose method steps for using a removable layer (e.g., see page 65, line 25; see also page 7, paragraph 1, disclosing "template dissolution"; see also 35 U.S.C. § 112, second paragraph rejection with regard to the use of a "template").

For ***claim 5***, Natan et al. disclose detectable signal by electromagnetic emission or absorption (e.g., Natan et al. disclose fluorescence; see figure 4; see also page 8, line 5; see also page 19, line 6; see also page 21, line 30).

For ***claim 7***, Natan et al. disclose quantum dots (e.g., see Example 2, wherein CdSe quantum dot is disclosed; see more generally page 3, line 2; see also page 17, line 18, see also page 36, line 1).

For ***claims 8-10***, Natan et al. disclose nucleic acid (e.g., see page 8, line 4; see also page 19, line 18; see also page 36, line 19; see also page 38, lines 19-24; see also page 40, line 11).

For ***claim 13***, Natan et al. disclose the use of a polymeric matrix (e.g., see page 4, line 1; see also page 7, line 12; see also page 8, line 3; see also page 10, lines 14-18; see also page 10, line 23; see also page 10, line 33; see especially page 11, lines 4-5, "Segments may be comprised of ... dye in polymeric material").

For ***claim 18-20***, Natan et al. further disclose the use of a linked probe (e.g., see page 13, paragraph 2, "Examples of functionalization include the attachment, often via a linker, to an antibody or antibody fragment, to an oligonucleotide [i.e., examples of probes]"; see also page 37, paragraph 2 disclosing examples like genotyping and SNP mapping; see also page 44, line 22). In addition, Natan et al. further disclose the use of multiple pluralities of microbar encoders (e.g., see page 18, paragraph 2, disclosing the use of thousands of "batches" of microbars; see also page 20, paragraph 1, especially line 13; see also paragraph bridging pages 44-45).

Response

4. Applicant's arguments directed to the above 35 U.S.C. § 102 rejection were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for the following reasons. Please note that the above rejection has been modified from it original version to more clearly address applicants' newly amended and/or added claims and/or arguments.

[1] Applicants argue that Natan does not disclose the preparation of microbars "without a template" (e.g., see 12/20/04 Response, paragraph bridging pages 7-8).

[2] Applicants argue that Natan does not teach the deposition of multiple layers unsupported by a template and then divided (e.g., see 12/20/04 Response, page 8, paragraph 2).

This is not found persuasive for the following reasons:

[1] The Examiner respectfully disagrees. Natan explicitly states that they do not use a template (e.g., see Natan et al., page 7, lines 1-5). In addition, the Examiner contends that it is not clear what the term "template" means as it is used in Applicants' specification (e.g., see 35 U.S.C. 112, second paragraph rejection below).

[2] The Examiner respectfully disagrees. Natan discloses the deposition of multiple layers (e.g., see figure 1A showing three different layers i.e., layers A, B and C; see also page 15, lines 5-11, "The present invention is directed to freestanding nanobar codes and their uses ... Nanobar codes that are not produced by some form of deposition or growth within a template ... may be considered free standing even though they have not been released from a template"; see also page 16, paragraph 2, "Other methods that may be applied to nanobar code (and template) synthesis include those that occur in solution (e.g., microfluidic synthesis), and/or involve photochemical techniques, MEMS, e-beam, micro-contact printing, and laser ablation methods [i.e., one of Applicant's preferred non-mechanical "division" techniques, see claim 14]").

Accordingly, the 35 U.S.C. § 102 rejection cited above is hereby maintained.

5. Claims 1-3, 5, 7-10, 13, 16-20, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ravkin et al. (WO 00/63419 A1) (Date of Publication is **October 26, 2000**).

For ***claims 1, 26 and 27***, Ravkin et al. (see entire document) disclose methods for making and using combinatorial chemical library supports having indicia at coding positions (see Ravkin et al., abstract; see also claims), which anticipates the claimed invention. For example, Ravkin et al. disclose **(a)** producing a multi-layered structure (e.g., see figure 3; see also page 16, paragraph 1 wherein the use of a "micro-punch" is disclosed; see also paragraph bridging pages 5-6; see also page 8, paragraph 3; see also page 15, last paragraph, see also claim 23; see also page 16, line 19 disclosing "rod-shaped" carriers; see also page 24, line 26; see also figure 2). Furthermore, Ravkin et al. disclose the use of transducing materials to make the layers including nanocrystals including Applicants' elected CdSe nanocrystals (e.g., see page 13, last paragraph; see also page 14, first paragraph). Ravkin also disclose sequentially depositing a plurality of polymers onto a substrate unsupported by a template (e.g., see figure 2 showing release of multi-layered substrate in figure 2g produced by the sequential deposition of layers 202, 204 and 205 followed by photolithographic cutting techniques). In addition, Ravkin et al. disclose the use of polymers that are capable of producing a characteristic electromagnetic signal (e.g., "A particularly preferred embodiment of the invention provides for encoded carriers incorporating nanocrystals prepared for use as fluorescent probes"; see also figures 11 wherein "fused glass fibers" and/or "plastic" are disclosed as carriers; see also figure 2 wherein polysilicon is disclosed; see also page 34, paragraph 2; see also page 27, paragraphs 1-2 wherein a polymeric matrix is disclosed). Ravkin et al. also **(b)** non-mechanically dividing the multi-layered structure into the plurality of microbar encoders wherein the plurality of microbar encoders have substantially identical

characteristic detectable signals (e.g., see paragraph bridging pages 12-13, "Optical fibers can be fused together to form structures consisting of a multitude of fibers ... The assembly is then drawn ... and cut into segments ... Cutting could be done individually by a laser [i.e., a non-mechanical method]"; see also figure 2 wherein the multi-layered structure is non-mechanically divided using photolithography techniques; see also page 5, lines 15-23; see also page 6, paragraph 2; see also page 8, paragraph 2; see page 8, lines 17-18; see also page 17, paragraph 2).

For ***claim 2***, Ravkin et al. disclose method steps for detaching the microbar encoders from the substrate (e.g., see figure 3 wherein microbar is detached with a micro-punch; see also figure 2 step 2f→2g).

For ***claim 3***, Ravkin et al. disclose method steps for using a removable layer (e.g., see figure 2, element 204).

For ***claim 5***, Ravkin et al. disclose detectable signal by electromagnetic emission or absorption (e.g., see page 13, last paragraph; see also page 14, first paragraph; see also page 32, paragraph 2 disclosing light emission).

For ***claim 7***, Ravkin et al. disclose quantum dots (e.g., see Example 2, wherein CdSe quantum dot is disclosed; see more generally page 3, line 2; see also page 17, line 18, see also page 36, line 1).

For ***claims 8-10***, Ravkin et al. disclose nucleic acid including DNA (e.g., see figure 5; see also page 10, line 19; see also page 16, last paragraph; see also page 17, second paragraph; see also claim 6).

For ***claim 13***, Ravkin et al. disclose the use of a polymeric matrix (e.g., see page 34, paragraph 2; see also page 27, paragraphs 1-2).

For ***claims 16-17***, Ravkin et al. also disclose photolithography including the use of a mask (e.g., see figure 2).

For ***claim 18***, Ravkin et al. disclose the use of a linked probe including biotin-avidin and chemical linkages (e.g., see page 12, paragraph 2).

For ***claims 19-20***, Ravkin et al. disclose the use of multiple pluralities of microbar encoders (e.g., see claim 9; see also claim 21 wherein the use of sub-libraries are disclosed).

Response

6. Applicant's arguments directed to the above 35 U.S.C. § 102 rejection were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for the following reasons. Please note that the above rejection has been modified from it original version to more clearly address applicants' newly amended and/or added claims and/or arguments.

Applicants argue that their newly amended claims reciting "non-mechanical" division overcome the Ravkin reference (e.g., see 12/20/04 response, page 8, "Ravkin" section)

This is not found persuasive for the following reasons:

The Examiner respectfully disagrees. Ravkin recites "non-mechanical" division such as the use of a laser (see newly amended rejection above). The Examiner further notes that the rejection has been corrected to reflect the "non-mechanical" division using photolithography that

disclosed in claims 16 and 17 (e.g., see Ravkin in figure 2). With regard to claims 16 and 17, the Examiner sets forth a new interpretation of the Ravkin reference wherein layer "205" alone comprises a "multi-layered" structure because 205 is deposited in "multiple" places. In addition, layer 205 includes a transducing material. Furthermore, Ravkin disclose sequentially depositing a plurality of polymers onto a substrate unsupported by a template such as the deposition of polymers 202, 204 and/or 205 all of which are "capable" of producing a characteristic electromagnetic emission because they can be doped with quantum dots and or dyes. Finally, Ravkin using photolithographic techniques to cute out the multi-layered structure (e.g., see figure 2, step 2f→2g wherein the multi-layered structure shown in figure 2g (i.e., has two "205" layers) is cut away from the substrate).

Accordingly, the 35 U.S.C. § 102 rejection cited above is hereby maintained.

7. Claims 1-3, 5, 7-10, 13, 16-20, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Stonas et al. (US Patent Application Publication US 2002/0104762 A1) (Filed **October 2, 2001**).

For ***claim 1***, Stonas et al. (see entire document) disclose methods for making colloidal rod particles as nanobar codes (e.g., see Stonas et al., abstract; see also claims), which anticipates the claimed invention. For example Stonas et al. disclose **(a)** producing a multi-layered structure (e.g., see Stonas et al., page 10, paragraph 90 wherein a "pre-formed stack" is disclosed; see also figure 3 showing "multi-layered" structure; see also claim 10, steps b and c drawn to depositing a first and second layer to form a "multi-layered" structure sequentially i.e., the deposition of a "first" material is followed by the

deposition of a "second" material). In addition, Stonas et al. disclose first/second materials that comprise "tranducing" materials (e.g., see Summary of Invention, paragraph 11, "The present invention includes free-standing particles comprising a plurality of segments ... The segments of the particles of the present invention may be comprised of any material. Included among the possible materials are a metal, any metal chalcogenide, a metal oxide, a metal sulfide, ... [etc]"; see also Example 2, wherein CdSe [i.e., Applicant's elected species] is disclosed; see also Figures 1-6). Stonas et al. also disclose that said materials can be polymeric materials that are capable of producing characteristic electromagnetic emission (e.g., see page 2, paragraph 11, "The segments of the particles of the present invention may be comprised of polymeric materials"; see also, page 4, paragraph 34, "... organic polymer materials could have segments defined by the inclusion of dyes that would change the relative optical properties of the segments [i.e., capable of producing characteristic electromagnetic emission]"). In addition, Stonas et al. disclose (b) non-mechanically dividing the multi-layered structure into the plurality of microbar encoders possessing a characteristic detectable signal (e.g., see Stonas et al., page 10, paragraph 90 wherein the mutli-layered pre-formed stack is "divided" using photolithographic techniques; see also claim 10, steps d-h).

For ***claim 2***, Stonas et al. disclose method steps for detaching the microbar encoders from the substrate (e.g., see page 12, paragraph 107, "a final critical step is required to separate each unique type of nanorod and release all the nanorods into solution"; see also claim 10, step h).

For ***claim 3***, Stonas et al. disclose method steps for using a removable layer (e.g., see page 3, paragraph 29 wherein "template dissolution" was disclosed; see also page 7, paragraph 63 wherein a "silver plug" is disclosed; see also page 9, paragraph 84 wherein the conductive layer is "dissolved").

For ***claim 5***, Stonas et al. disclose detectable signal by electromagnetic emission or absorption (e.g., Stonas et al., page 4, paragraph 33).

For ***claim 7***, Stonas et al. disclose quantum dots (e.g., see Example 2, wherein CdSe quantum dot is disclosed; see also page 1, paragraph 7).

For ***claims 8-10***, Stonas et al. disclose nucleic acid including DNA and RNA (e.g., see Stonas et al., page 1, paragraph 5; see also page 3, paragraph 27; see also page 2, paragraph 11 wherein the nanoparticles can be "functionalized" with oligonucleotides).

For ***claim 13***, Stonas et al. disclose the use of a polymeric matrix (e.g., see Stonas et al., page 4, paragraphs 34 and 37).

For ***claims 16, 17, 26 and 27***, Stonas et al. disclose the use of photolithography [i.e., a "non-mechanical" method] to divide the multi-layered structure and also the use of a mask/etching (e.g., see Stonas et al., page 10, paragraph 90, "In another series of embodiments, photolithographic techniques are used to etch nanoparticles from a pre-formed stack of material, wherein each layer of the stack corresponds to a particular segment of the subsequent nanoparticle ... layers of material ... are deposited onto a silicon wafer to form a stack. A layer of photoresist is then spun on the material stack. The stack is then exposed to radiation (e.g., UV light) by conventional mask-based photolithography (or by IL or by AIL) to pattern a grid on the resist. Following

development of the resist, the entire film stack is then etched revealing many cylindrical film stacks. The nanoparticles can be liberated by one of the methods described above"; see also claim 10, steps d-g).

For ***claim 18-20***, Stonas et al. further disclose the use of a linked probe (e.g., see page 2, paragraph 11 wherein the nanoparticles can be "functionalized" with various probes; see also page 5, paragraph 42). In addition, Stonas et al. further disclose the use of multiple pluralities of microbar encoders (e.g., see page 5, paragraph 42, disclosing the use of thousands of "batches" of microbars; see also page 6, paragraphs 54-55).

Response

8. Applicant's arguments directed to the above 35 U.S.C. § 102 rejection were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for the following reasons. Please note that the above rejection has been modified from it original version to more clearly address applicants' newly amended and/or added claims and/or arguments.

Applicants argue, "... the claims have been amended to recite sequentially depositing a plurality of polymers onto a substrate unsupported by a template, wherein each polymer is capable of producing a characteristic electromagnetic emission ... [which] Stonas fails to disclose" (e.g., see 12/20/04 Response, pages 8-9).

This is not found persuasive for the following reasons:

The Examiner respectfully disagrees. Stonas et al. disclose the newly required claimed limitations as outlined in the amended rejection above.

Accordingly, the 35 U.S.C. § 102 rejection cited above is hereby maintained.

Claims Rejections - 35 U.S.C. 101

9. Claims 1-3, 5, 7-10, 13, 16-20 and 26-29 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed had possession of the claimed invention. This is a new matter rejection.

B. In claim 1 (Currently amended), to the extent that the "deletion" of the phrase "substantially identical" extends beyond the previously claimed methods that were drawn "solely" to the use of microbar encoders possessing "substantially identical" characteristic detectable signals, the increased breadth of possible modification (e.g., a microbar encoders with non-identical characteristic detectable signals) constitutes new matter. If applicant believes this rejection is in error, applicant must disclose where in the specification support for this amendment can be found in accordance with MPEP 714.02. Therefore, claim 1 and all claims from which 1 depends represent new matter i.e., claims 2-3, 5, 7-10, 13 and 16-20. In addition, to the extent that Applicants' newly added claims include "non-identical" characteristic detectable signals, this increased breadth also constitutes new matter.

Response

10. Applicant's arguments directed to the above New Matter rejection were fully considered (and are incorporated in their entirety herein by reference) but were not deemed persuasive for

the following reasons. Please note that the above rejection has been modified from it original version to more clearly address applicants' newly amended and/or added claims and/or arguments.

Applicants did not argue and/or amend in response to this rejection.

Accordingly, the New Matter rejection cited above is hereby maintained.

New Rejections

Objections to the Claims and/or Drawings

11. Claim 19 is objected to because of the following informalities:

A. Claim 19 (currently amended) improperly uses the word "by" consecutively (i.e., "by by") in line 6. Correction is requested.

B. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: FIG. 4 fails to show elements 231, 232, 233, 234, 235, 241, 242, and 243 as presented in the specification (e.g., see page 24, paragraph 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims Rejections - 35 U.S.C. 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-3, 5, 7-10, 13, 16-20, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. For **claims 1, 16, 18-20 and 26**, the term "template" is vague and indefinite. For example, Applicants define a template as "... any support, be it solid or otherwise, used to define the dimensions of the microbar encoder" (see specification, page 18, lines 21-24). However, Applicants use of a substrate would necessarily define at least the "bottom" two dimensions of the encoder. In addition, the "side" dimension in several of Applicants' preferred embodiments would also be defined by their "non-template" (e.g., see page 19, paragraphs 2-3, "Since the removable layer 12 can be patterned with a series of recesses and protuberances, the first deposited layer 15 [i.e., the first layer of the microbar] will, in conforming to the contour of the removable layer 12, acquire a pattern on its bottom surface [i.e., the dimensions of the bottom surface are defined by the substrate and, as a result, the substrate would appear to violate Applicants' definition of a template]"). Thus, Applicants' definition of a "template" is inconsistent with the manner

in which the term is used throughout the specification. Thus, the metes and bounds of the claimed invention cannot be determined. Therefore, claims 1, 16, 18-20, 26 and all dependent claims are rejected under 35 U.S.C. 112, second paragraph.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon D Epperson whose telephone number is (571) 272-0808. The examiner can normally be reached Monday-Friday from 9:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571) 272-0811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jon D. Epperson, Ph.D.
May 13, 2005

BENNETT CELSA
PRIMARY EXAMINER